

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-8 (canceled)

Claim 9 (currently amended): An endovascular graft for treating vasculature, comprising:

a graft component having an opening and a plurality of structures extending longitudinally beyond the opening, the opening having an opening circumference;
an expandable frame;
an attaching structure that attaches the expandable frame to the graft component by engaging at least one of the plurality of structures extending longitudinally beyond the opening;
and
an anchoring structure that anchors the expandable frame to the lumen wall;
wherein the expandable frame is longitudinally separated from the graft component;
wherein the attaching structure attaches the expandable frame to the graft component at discrete locations on the graft component so that less than an entirety of a graft circumference is affixed to the attaching structure and wherein the opening of the graft component lacks other structure supporting a totality of the opening circumference.

Claim 10 (previously presented): The graft of claim 9, at least one of the plurality of structures extending beyond the opening is in the form of a tab.

Claim 11 (previously presented): The graft of claim 10, wherein the tab is formed as part of the graft component.

Claim 12 (previously presented): The graft of claim 10, wherein the tab is formed by cutting one of the plurality of structures extending beyond the opening and folding the graft component material back.

Claim 13 (previously presented): The graft of claim 10, wherein the tab is folded over a portion of the attaching structure.

Claim 14 (canceled)

Claim 15 (previously presented): The graft of claim 10 wherein the tab is reinforced by sutures.

Claims 16-28 (canceled)

Claim 29 (previously presented): The graft of claim 9, wherein the graft component is bifurcated.

Claim 30 (previously presented): The graft of claim 9, wherein the expandable frame is self-expanding.

Claim 31 (previously presented): The graft of claim 9, wherein the anchoring structure comprises a hook or barb.

Claim 32 (previously presented): The graft of claim 31, wherein the hook or barb is curved.

Claim 33 (previously presented): The graft of claim 31, wherein the hook or barb is tapered.

Claim 34 (previously presented): The graft of claim 31, wherein the hook or barb is bidirectional.

Claim 35 (previously presented): The graft of claim 31, the hook or barb further comprising a tail.

Claim 36 (previously presented): The graft of claim 31, the hook or barb cut at the edge of a stent strut of the anchoring structure.

Claim 37 (previously presented): The graft of claim 31, the hook or barb located near the junction of stent struts of the anchoring structure.

Claim 38 (previously presented): The graft of claim 9, the graft component further comprising reinforcing structures.

Claim 39 (previously presented): The graft of claim 38, wherein the reinforcing structures are self-expanding.

Claim 40 (previously presented): The graft of claim 38, wherein a reinforcing structure is in the form of a stent.

Claim 41 (previously presented): The graft of claim 38, wherein a reinforcing structure is on an exterior of the graft component.

Claim 42 (previously presented): The graft of claim 38, wherein a reinforcing structure is on an interior of the graft component.

Claim 43 (previously presented): The graft of claim 42, wherein a reinforcing structure comprises a hook or barb.

Claim 44 (previously presented): The graft of claim 43, wherein the hook or barb is curved.

Claim 45 (previously presented): The graft of claim 43, wherein the hook or barb is tapered.

Claim 46 (previously presented): The graft of claim 43, wherein the hook or barb is bidirectional.

Claim 47 (canceled)

Claim 48 (previously presented): The graft of claim 43, the hook or barb cut at the edge of a strut of the reinforcing structure.

Claim 49 (previously presented): The graft of claim 43, the hook or barb located near the junction of struts of the reinforcing structure.

Claims 50-55 (canceled)

Claim 56 (previously presented): The graft of claim 9, further comprising a plurality of radiopaque markers.

Claims 57-60 (canceled)

Claim 61 (previously presented): The graft of claim 9, the expandable frame further including a plurality of endpoints, certain of said plurality of endpoints being offset from other of said plurality of endpoints.

Claim 62 (previously presented): The graft of claim 9, the expandable frame further including endpoints that are larger than a strut thickness of the expandable frame.

Claims 63-69 (canceled)

Claim 70 (previously presented): The graft of claim 9, further comprising a system of variable sized radiopaque markers attached to the graft component.

Claim 71 (canceled)

Claim 72 (currently amended): A method of treating a patient's vasculature, comprising: placing a graft within an artery, the graft having a graft component having an opening with an opening circumference and a first expandable frame attached to but longitudinally separated from the graft component by an attaching structure, wherein the attaching structure attaches the first expandable frame to the graft component at discrete locations on the graft component so that less than an entirety of a graft circumference is affixed to the attaching structure wherein the opening lacks other structure supporting a totality of the opening circumference; and

placing a second expandable frame within the artery, the second frame placed at least partially within the graft component;

whereby the second expandable frame provides a seal between the graft component and the artery.

Claim 73 (previously presented): The method of claim 72, wherein the second expandable frame comprises a hook or barb.

Claim 74 (previously presented): The method of claim 73, wherein the hook or barb is curved.

Claim 75 (previously presented): The method of claim 73, wherein the hook or barb is tapered.

Claim 76 (previously presented): The method of claim 73, wherein the hook or barb is bidirectional.

Claim 77 (previously presented): The method of claim 73, the hook or barb further comprising a tail.

Claim 78 (previously presented): The graft of claim 73, the hook or barb cut at the edge of a strut of the expandable frame.

Claim 79 (previously presented): The graft of claim 73, the hook or barb located near the junction of struts of the expandable frame.

Claims 80-85 (canceled)

Claim 86 (canceled)

Claim 87 (previously presented): The graft of claim 9, further comprising stent structures attached to both an inside surface and an outside surface of the graft component.

Claim 88 (previously presented): The graft of claim 9, further comprising a plurality of reinforcing structures attached to the graft component, wherein the plurality of reinforcing structures, the expandable frame and the anchoring structure are each spaced longitudinally

along the graft component so that the reinforcing structures, expandable frame and anchoring structure are non-overlapping.

Claim 89 (previously presented): The graft of claim 9, further comprising a first leg portion and a second leg portion, the first leg portion being attached along its length to the second leg portion.

Claim 90 (previously presented): The method of claim 72, wherein the attaching structure attaches the expandable frame to the graft component at discrete locations on the graft component so that less than an entirety of a graft circumference is affixed to the attaching structure.

Claim 91 (previously presented): The method of claim 72, wherein the graft component further comprises stent structures attached to both an inside surface and an outside surface of the graft component.

Claim 92 (previously presented): The method of claim 72, wherein there are a plurality of reinforcing structures attached to the graft component, wherein the plurality of reinforcing structures, the first expandable frame and the second expandable frame are each spaced longitudinally along the graft component so that the reinforcing structures, first expandable frame and second expandable frame are non-overlapping.

Claim 93 (previously presented): The method of claim 72, wherein the graft component further comprises a first leg portion and a second leg portion, the first leg portion being attached along its length to the second leg portion.